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**Information Technology Directors' Efforts on Innovation, Integrated  
Marketing Communications and Brand Equity**

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# **Information Technology Directors' Efforts on Innovation, Integrated Marketing Communications and Brand Equity**

**Purpose** – The main purpose of this study is to examine information directors in the area of communication activities related to innovation and marketing decisions in branding.

**Design/methodology/approach** – The study is quantitative and utilized structural equation modeling technique with the approach of minimum trivial squares for analyzing the data. 130 questionnaires were distributed among information technology directors in Tehran and they form the statistical population for the research.

**Findings** – The results suggested that innovation in integrated marketing communications has positively significant effect. In addition, both the variables of innovation and integrated marketing communications positively and significantly affect the three components of brand equity (namely, brand image, the perceived quality and brand loyalty).

**Originality/value** – Despite the growing acknowledgment the importance of innovation, integrated marketing communications and brand equity, however, there are few studies on the role and importance of information technology directors' efforts on innovation, integrated marketing communications and brand equity.

**Keywords:** Innovation; integrated marketing communications; brand equity; information technology; directors' efforts; brand image

## **1. Introduction**

In the contemporary universal economics known by high dynamics and intensive competition, companies try to find the best way for communicating with their costumers and they do their best in order to convince the costumers about the product quality and advantages that people receive from their products and services. Therefore, marketing communications play a crucial role in creating and keeping the relation among those have common interests and also in influencing the relations with regard to marketing and brand equity (Reid et al., 2013). In addition to devising strategies for attracting new customers and trading with them, organizations attempts to keep the existing customers and create permanent relations with them. The increasing competing in business has made to organizations desire customers who have sustainable and integrated connections with the suppliers as well as purchasing large volumes. If the organizations want to manage their relations with the costumers, it will not be possible to have similar and equal connections with all of their customers. Rather, they should precisely study their customers' behavior, needs and expectations and based on which they could form their ties (Nguyen and Mutum, 2012). After collecting customers' information, the organizations should make their decisions so that they could selectively deepen their relations with particular costumers and may break their relations with some others (Niraj et al., 2008).

Hence, communications have turned into one of the critical aspects and a crucial factor of marketing. Organizations use various forms of marketing communications in order to meet their financial and nonprofit objectives. Integrated Marketing Communications (IMC) is one of the most important procedures of communication which is widely used in the world. The emergence of the concept, reflection and practice has affected companies, individuals, public corporates and

political parties (Brunello, 2013). In this globalization era, developing various aspects of life and economy is easily felt in the world. The change speed is often regarded as a change that is an exponential movement rather than linear in order to clarify how the change is unbelievable. Above all, the role of information technology and information (telecommunication) is of paramount importance. Without development in this technology, there will be no appropriate change (Dmarjati et al., 2016).

Given the highly dynamic and competitive atmosphere of technology which affects marketing and communication procedures, undoubtedly, IMC caused a mobilization among academicians and practitioners (Porcu et al., 2017). Although the idea has long been proposed, what is new about IMC is that technology advancement has made it possible to operationalize the idea. In fact, development in information and communication technology (ICT) is considered as one of the most important contextual factors for IMC. The exclusive capability of developed technology provides two ways: one by one ordering, data-driven communication programs enable companies to move toward paradigm IMC. Thus, given the advanced technological solutions, IMC program is able to receive precise information from the customers; in the sense that database management is essential for IMC approach as it is appropriately defined for an objective (Seric et al., 2014). Any organization needs continuous and fundamental improvement in order to achieve growth and competitive privilege. Thus, similar to quality and benefit, contemporary organizations should establish innovation as a strategic principle all over the organization. The studies demonstrated that innovation in organizations is one of the principal incentives for competition and national development (Porcu et al., 2017).

In the majority of previous studies, the relation for each of the afore-mentioned factors with integrated marketing communications and brand equity was separately investigated. Lack of attention to other effective variables and lack of their involvement in the innovation process has led to lower precision in the findings and hence, they cannot adequately represent a realistic framework. The present research, by proposing a comprehensive and integrated model, is an attempt to simultaneously examine and describe the effect of all of these factors by considering the connections among them in order to confirm the significant effect of these factors on this area through dealing with the role of innovation in integrated marketing communications and brand equity.

## **2. Theoretical underpinnings and hypotheses development**

The following section defines each of the constructs for this study, followed by a discussion of how the constructs interact with each other.

### **Innovation**

Today, innovation and creativity in the contemporary competitive atmosphere are considered as the most significant factor for human development in surviving the companies and all other contexts. Innovation is defined as a corporates attempts for finding new opportunities and solutions. Innovation ability is a characteristic which enables a business to quickly create ideas, new methods, and propagate and introduce new products and services or improve the existing products and services. The innovation ability is source for dimensions that need to be well equipped in order to support innovation and successful management of change (Balan and Lindsay, 2010). Innovation means creating, developing and implementing a new product,

process of service with the purpose of improving efficiency, competitive privilege and profit (Cassimana et al., 2010).

### **Integrated marketing communications**

Integrated marketing communications indicate solidarity (unity) of all marketing tools, approaches and resources in a corporate with has maximum effect on the consumers' mind leading to maximum profit with the minimum costs. Generally, marketing begins with "marketing combination" and includes internet-based marketing, support (sponsor), direct marketing, database marketing (data bank) and general relations. Combining all of the advertising instruments along with other parts of marketing is done for obtaining more competitors which is called integrated marketing communications (Brunello, 2013). Therefore, IMC is a marketing activity aimed at raising awareness and knowledge about products with different characteristics, information about the products with various features, creating an image of the product or a positive perspective, tendency toward buying a product (Damarjati, 2016).

### **Brand image**

Brand image is a simple perception phenomenon influenced by the corporate's activities. Brand image is the customer's perception of the quality combined with the name of the brand (Ishaq, 2012). In other words, brand image is the customer's imagination of the whole brand set created by the corporate. The customer creates an image in his/her mind as a combination of all sending signs by the brand including name, appearance signs, products, advertisement, mottos, and official announcements etc. (Lien et al., 2015).

## **Perceived quality**

Perceived quality refers to the degree that is the result of customers' mental evaluation defined as the customer's general perception of a product or service. Indices such as delicacy and beauty, attraction, suitable product quality, appropriate compounds quality in products, manufacturing quality, flawlessness of strategy innovation is defined as business strategy change in a company for creating new value for customers and the company (Johnson and Bate, 2003), product, sustainability, reliability of brand performance and service providing quality in the variable are examined (Erdogmus and Budeyri, 2012). Mentally positive evaluation of customers about the product or highly perceived quality directs the consumer toward selecting one commercial brand rather than others (Zehir et al., 2011).

## **Loyalty to brand**

In highly competitive markets, with the increase in risk and decrease in product distinction, loyalty to brand is known as a key element in marketing techniques. Loyalty to brand has advantages such as banning competitors' entrance, higher ability in responding to competitive threats, more sales and income and lower sensitivity by the customer to competitors' marketing efforts. Thus, loyalty resources and its creating processes are the main concern in marketing studies (Kurt et al., 2008) Loyalty to brand is a status that shows how it is possible for a customer to turn into another brand, especially when that brand makes a change in the price or other aspects of the products. Moreover, it refers to the customer's positive perspective toward brand, his/her loyalty to the brand and his/her intention to continue purchase from that brand (Buil et al., 2013).



## **Hypotheses**

In his research, Widianingram (2012) emphasized the importance of IMC for keeping the relations and connection with customers and repetitive purchase. For example, Taleghani and Almasi's study on 400 Iranian insurance companies were conducted in Tonekabon. The variables in this research included commercial name, brand equity and Aaker model. Nigam and Koshiks' variables in their article (2011) were brand equity, brand association, loyalty to brand and customers' purchase decision. 130 respondents were selected. Das (2012) identified factors influencing customer's behavior; while they tend to decide about buying cellphones.

According to Koller (2009), marketing communication environment has dramatically changed in recent years including media environment. Thus, marketing experts should have an appropriate strategy for dealing with such competition. Sowantara and Tiachamansatit (2012) stated that one of the well-known strategies for dealing marketing competition is IMC. Koller (2009) clarified that IMC is a combination and adaptation of various communication options for creating given awareness about mental image in the consumer's mind. Aaker (1991) explained that brand equity at the purchase time is important as the loyalty, awareness and perceived quality of the brand. In addition, brand association influences the customers and competition with competitor's attractions. Hence, there are relations among IMC, brand equity and purchase decision with closely tie them to each other (Damarjati, 2016).

In similar vein, Kem and Hyon (2011) proposed a model for testing communications between marketing efforts (distribution channel, price, promotion and after-sale services), company's image and three dimensions of brand equity (brand awareness and association, perceived quality

and loyalty to the brand). In this model, brand awareness and association is considered as one dimension. Combined marketing efforts in this model are considered as an introduction and beginning for the model and also brand equity is regarded as brand outcome (Alwi et al., 2016). Company's image factor creates a connection among combined marketing efforts and brand equity dimensions as an intermediary variable. In this model, brand equity along with its internal components is known as market performance representative. In fact, Kem and Hyon adapted this part of their model from Yoo, Dante and Lees' value model (2001).

Boil and Martiz (2013) found out that a strong and valuable brand could be effective in company's performance and achievement to organizational objectives which is done through its effect on consumers' reactions and responses. According to the model, awareness of the brand is the first step in creating brand equity. In fact, brand awareness guides the consumers toward perspectives such as brand association and perceived quality of brand. Brand association and perceived quality finally leads to loyalty to the brand. With respect to especial value for responses and consumption reactions, four behavioral responses were considered by the consumers: 1) tendency to paying more for the brand, 2) brand development and propagation, 3) brand selection and preference, 4) brand purchase intention.

Furthermore, Hakigula's et al., (2012) findings suggest that Turkish companies with little and medium size have high security for consumers to reach higher innovative performance. In addition, they tend to activate and emphasize innovation importance. Also, they consider resources as a means for compensating resource shortage in achieving highly innovative performance. The investigation also showed that small and medium Turkish companies are

achieving a way for reaching innovative performance. The findings show that hyperactivity, innovation, customer strength, and resource levelers are among entrepreneurial marketing dimension which positively affect innovative performance. The concept of entrepreneurial marketing emphasizes innovation and idea development along with understanding market needs and could create remarkable competitive privilege for companies in order to actively find innovative options for customers.

In another research titled as different roles of brand credit and face in purchase intention on 200 diaries consumers, the findings showed that there is a positively significant relationship between perceived quality and brand face, between brand face and loyalty and between perceived quality and purchase intention (Gilaninia et al., 2012). The results of Oki's et al., study on examining perceived quality in developing brand credit and face showed that brand face could affect loyalty to the brand through honesty (Oki et al., 2011). For more details about the study's constructs, a summary of key studies on innovation relation with IMC and brand equity is provided in Appendix A. Therefore, given the theoretical fundamentals and conceptual research model, the research hypotheses are as follows:

- H1. Innovation has positively significant effect on IMC
- H2. Innovation has positively significant effect on brand image.
- H3. Innovation has positively significant effect on the perceived quality.
- H4. Innovation has positively significant effect on loyalty to the brand.
- H5. IMC has positively significant effect on perceived quality.
- H6. IMC has positively significant effect on perceived quality.
- H7. IMC has positively significant effect on perceived quality.

H8. Perceived quality has positively significant effect on brand image.

H9. Perceived quality has positively significant effect on loyalty to the brand.

Given the explanations about theoretical bases for identifying connection with innovation and IMC and brand equity, in this research, the conceptual research model is presented in Figure 1 according to research by Srich, Swara and Molina (2014).

Figure 1 here.

### **3. Research Method**

With respect to the purpose and due to its application in marketing, the present article is an applied research based on descriptive data collection; however, with regard to the type of descriptive research, the study is a periodic survey. Statistical population in this research is Tehran Information Technology Corporates. In order to select statistical sample, 130 corporates were selected by using Cochran Formulae.

In order to collect data, questionnaire was used. Distributional questionnaire is formed of two parts and the devised options for responding are 5-point Likert scale. The first part is related to demographic variables and the second part includes testing research variables based on which, indices related to “innovation” variable are based on Hogan and Kote indices (2013), testing variable IMC is based on Lee and Park’s indices (2007) and testing variables of “perceived quality”, “loyalty to the brand” and “brand image” are based on Kem’s et al. indices (2003),

Kem and Kem (2005), Srich, Swara and Molina (2014). In order to analyze the data, modeling structural equations and Smart PLS3 software (professional version) was used.

In order to examine model's indices in this approach, minimum trivial squares are used from various indices including, root squares obtained from the difference between co-variance matrix of the left sample and standardized/ non-standardized co-variance (SRMR and RMR)(according to Chin et al. (2014) view, values lower than 0.08 are acceptable for this index). Bentler-Bont's index (NFI) (based on Brun's view (2008) values higher than 0.9 are acceptable). GOF index (based on Tetenhouse's et al., (2005), three values of 0.10, 0.25 and 0.36 are introduced as weak, medium and strong values, respectively for the model index). R2 index indicates the effect of one external variable on an internal one. The higher R2 related to internal constructs of the model, the more value the model possesses. Also, in order to examine the reliability of Cronbach alpha and combined reliability (higher than Cronbach alpha and combined reliability higher than 0.70 about basic confirming constructs of the research) and validity, Average Variance Extracted validity (The minimum accepted value for the extracted mean variance equals 0.4) and Discriminant validity (acceptable reliability and validity of a model suggest that a construct has higher interaction with its indices in the model in comparison with others in which the extracted mean square variance for each construct should be larger than the ghadremotlagh coefficient among the variables) are used.

#### **4. Analysis of findings**

First, descriptive statistics tests are examined. Accordingly, 130 participants completed their research questionnaires who were senior directors of active corporates in information technology

discipline in Tehran and the life average of the corporates was 7 years. 84 percent of respondents were male while 16 percent were female. Also, 71 percent of the respondents had higher educations. Moreover, all of the respondents were among the senior directors of corporates.

In order to answer the research questions, structural equation modeling and Smart PLS3 Software were used. The numbers in Figure 2 show the T value for the relation among research constructs. If the value in the confidence level of 95 percent is higher than 1.96, it suggests the meaningfulness of the correlation among the constructs. As shown, all of the meaningful relations among the research constructs are higher than 1.96 which suggests the significance of the effect on the existing relations among the variables of the research in the confidence level of 1.96. In addition, in Figure 3, the route factors are shown in the standard status. In inferential statistics, after collecting data, the analysis was done by Smart PLS 3 Software and the results are shown in the following tables (see Table 1, 2, and 3).

Tables 1, 2 and 3 here.

Figures 2 and 3 here.

Given the findings of the study, the research hypotheses are examined in Table 4.

Table 4 here.

## **5. Conclusion**

The present research aimed at investigating the effect of innovation on IMC and brand equity among information technology directors in Tehran. The results suggested that innovation had positively significant effect on IMC clarifying 36.8 percent of its changes. Given the fact that the level of innovation in products and services in information technology is usually high, it seems essential of most corporates to implement integrated marketing communications systems according to their strategies and purposed in order to have successful performance with regard to innovation rate in marketing. The results of this section are in accordance with Kondo and Kaywoods' findings (2011).

In addition, the results of the study showed that innovation had positively significant effect on brand image. As it was predicted, innovation in products of information technology is a critical element for such corporates and usually the pioneer corporates were able to create an innovative mental image in the customers' minds. The results of this section are in correspondence with Virawardena et al. (2006) and Damarjatis' (2016) findings.

The results also showed that innovation had positively significant effect on the perceived quality. Principally, quality in products and services of information technology has close ties with innovation and the more the innovation in products, the more quality in the services are perceived by the customers. Hence, the results of the study are also in accordance with those of Aaker (1999) and Boil and Martiz (2013).

The results also suggested that innovation had positively significant effect on loyalty to the brands. Loyalty to the brands is also influenced by various factors like service quality, meeting customers' needs, innovation etc. Innovation in products has made the given brands in the research make more efforts in providing products and services in order to receive the customers' satisfaction. In addition, the customers showed that they are always looking for updated and innovative products in this industry and are more inclined to brands that have such characteristics. The results of this section are in accordance with those of Gilanina et al. (2012) and Kem and Hyon (2011).

On the other hand, it was shown that IMC has positively significant effect on brand image, perceived quality and loyalty to the brand. Applying IMC has made it possible for the given corporates to have high correspondence between holistic objectives and strategies of corporates and marketing programs also made it possible to primarily recognize the needs and want of target customers and secondarily devise integrated and comprehensive plans for meeting the needs through applying IMC. As a result, the correspondence could have the most significant effect on the corporate's performance and reflect as a competitive privilege for customers. The consequences of this issue led to higher loyalty to brand and higher perception of the quality of products and finally, better image of the brand for customers.

Furthermore, the perceived quality was a factor which had positively significant effect on the brand image and loyalty to the brand. Generally, as it was predicted, the higher the quality of presented products to the customers, the more satisfaction the customers will have which results



in better image of a high quality corporate and consequently, more loyalty to the brand. The results of this section were in correspondence with those of Seric, Swara and Molina (2014).

### **Managerial suggestions**

Given the results of findings of the present research, it is suggested that:

1. It is recommended that innovation be incorporated both in holistic organization strategies and organization marketing strategies as a critical factor so that it could maximize the implementation effects of IMC.
2. It is recommended to consider a comprehensive program for innovation in order for the corporates to be able to deal with developing innovations continuously so that they could use it as a competitive privilege and have the most significant effect on marketing program.
3. It is recommended to appropriately identify the needs and wants of entitled individuals and to use them in devising IMC programs. This will cause IMC programs to have the highest efficiency.

### **Research limitations**

Although the results of the research provide suitable information about innovation relation with IMC and brand equity, there are some limitations. The most important limitation for this study is having little research in investigation of connection between innovation and IMC in the literature which confronted the research with some limitations in examining the results. Further, few empirical research in innovation connection with brand equity was a factor which brought about remarkable limitations on the study.

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## Appendix A. Summary of key studies on innovation relation with IMC and brand equity.

Researcher (year of research)	Summary
Brunello, A. (2013)	In this research, attention was given to the importance of IMC from both customers' and corporates' perspectives. In this article, brand equity was also important based on marketing and financial perspectives and its relation with IMC was investigated
Damarjati, I. H., Kusumawati, A., and Mawardi, M. K. (2016).	The article examined the effect of IMC on brand equity and its direct and indirect effect on decision for purchase. The research was quantitative and route analysis was used for analyzing the data. All of the above-mentioned issues were confirmed. Moreover, it was known that brand equity played the role of an intermediary variable with IMC and decision for purchase.
Mihart, C. (2012)	This research was theoretical and examined the variables of the research without any statistical analysis. Three main variables of the study included IMC, customer behavior and customer's decision making process.
Dewhirst and Davis (2005)	In this study as a case study, the tobacco company in Canada examined three significant methods of IMC (strategic perspective, inter-functional planning and monitoring, data-driven targeting and communications)
Luxton et al., (2015)	According resource-based perspective, this study made an attempt to see how IMC accelerated brand financial performance through affecting communication campaigns and market-based performance. This study was done based on quantitative structural equation modeling. Conceptual framework is shown in the below. Statistical population for the research was active managers in communication industries.
Porcu et al., (2017)	This research was done based on quantitative perspective and structural equation modeling. The structural model was given below. This research sought to investigate the intermediary role of IMC with brand privilege and adhocracy and flexible culture. Statistical population for this study was active service-based businesses in Spain with 40 minimum personnel.
Seric et al., (2014)	This study examined the effect of IMC on brand equity in customers view in hoteling industry. Also, the role of high technologies as a moderator variable was highlighted. This study investigated the comprehensive literature about IMC dimensions and brand equity proposed by various researchers.
Schultz, D. E., Kim, I., and Kang, K (2014).	The study examined the review of the literature in IMC and proposed classifications and distinct information from the scholars and studies.

**Table 1: Results of confirming load, Cronbach alpha, combined reliability and AVE**

<b>Research variables</b>	<b>Index</b>	<b>Standard load factor</b>	<b>T</b>	<b>Cronbach Alpha</b>	<b>Combined reliability</b>	<b>AVE</b>
IMC	Tools and channels consistency	0/577 0/712	5/510 8/330	0/838	0/918	0/587
	Visual consistency	0/617	6/373			
	Linguistic consistency	0/667	7/357			
	Brand image consistency					
Brand image	Comfortable	0/652		0/866	0/908	0/560
	High level of service	0/614	8/341			
	Cleanliness	0/727	12/980			
	Luxury	0/774	21/403			
	Suitable place for high-class	0/734 0/845	14/311			
	Feeling special	0/856	26/830			
	Differentiated image					
Perceived quality	Special and valued customer	0/845		0/921	0/937	0/653
	Well-mannered staff	0/870 0/730	28/030 20/022			
	Services at promised time	0/866 0/894	29/057 39/621			
	Effective complaint handling	0/813 0/748	18/170			
	Active communication					
	Staff knowledge					
	Anticipated service for needs					
Loyalty to the brand	Intention to return	0/601		0/931	0/944	
	Satisfaction	0/710	5/723			
	Intention to recommend	0/737	11/487			
	Non-intention to change	0/725				
Innovation	revolutionary for the industry	0/840		0/923	0/932	0/648
	Adopt novel ways to market	0/877 0/795	52/130 32/945			
	stay ahead of the market	0/714	17/395			

	by innovation	0/827	29/845			
	Innovate marketing	0/850				
	programs new software	0/799				
	new technology		38/450			
	new integrated systems		34/348			

**Table 2. Measuring model fitness indices.**

Research constructs	R2	GOF	SRMR	NFI
IMC	0/132			
Brand image	0/743	0/63	0/054	0/941
Perceived quality	0/841			
Loyalty to the brand	0/823			
Innovation				

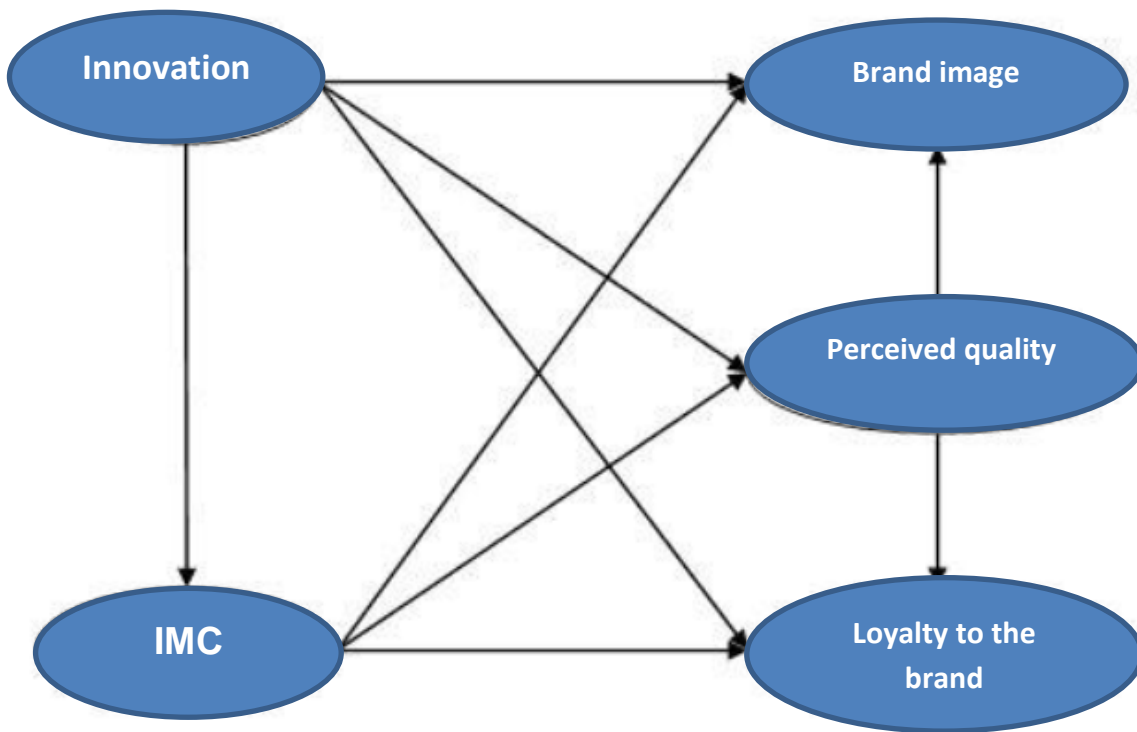
**Table 3. Examining discriminant validity of research constructs.**

Constructs	Mean	Standard deviation	1	2	3	4	5
IMC	3/82	0/621	0/754				
Brand image	3/93	0/881	0/697	0/848			
Loyalty to the brand	4/02	1/041	0/689	0/819	0/896		
Innovation	3/85	0/734	0/368	0/718	0/784	0/905	
Perceived quality	3/79	0/912	0/361	0/718	0/792	0/818	0/925

**Table 4. Examining the research hypotheses**

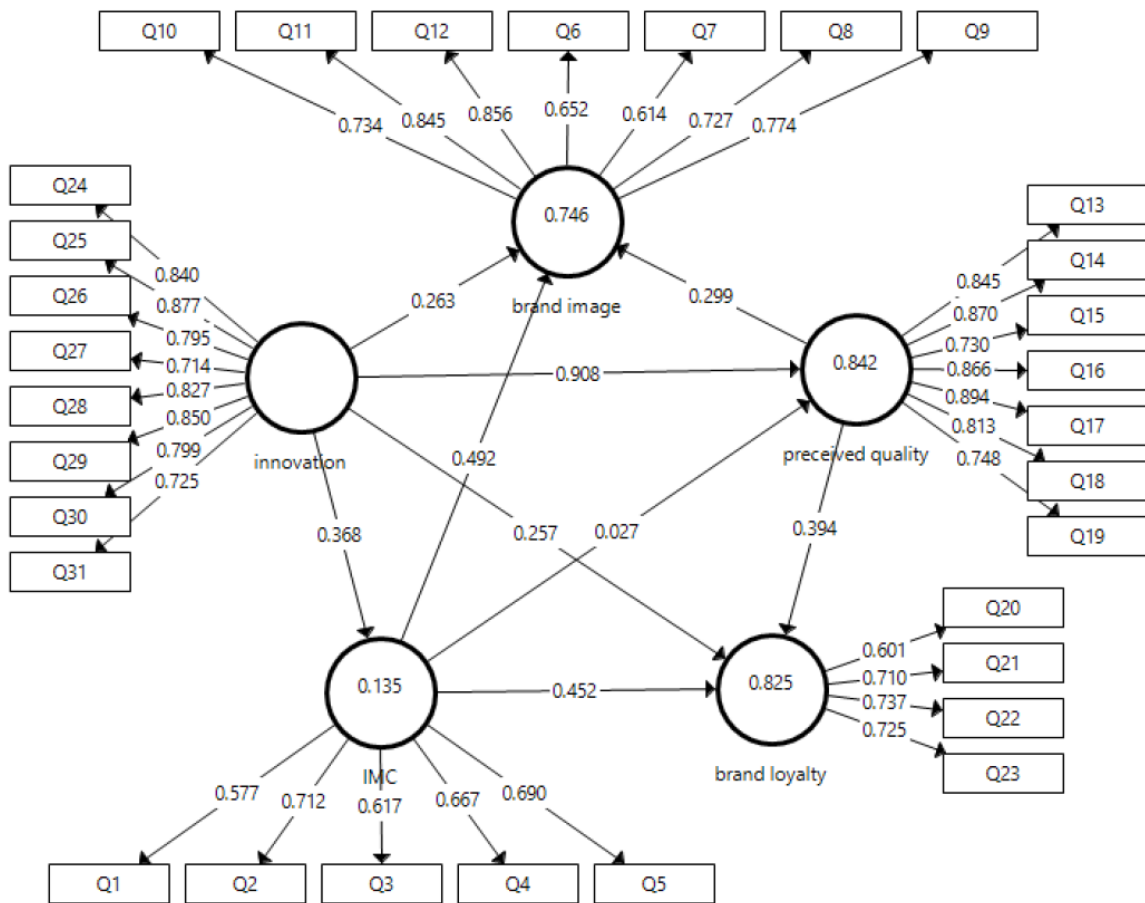
<b>Research hypotheses</b>	<b>Route factor</b>	<b>T statistics</b>	<b>Test results</b>
Innovation-IMC	0/368	6.930 (More than 1.96)	Confirming hypothesis
Innovation-brand image	0/263	-(More than 1.96)	Confirming hypothesis
Innovation- perceived quality	0/908	(More than 1.96)	Confirming hypothesis
Innovation-loyalty to the brand	0/257	(More than 1.96)	Confirming hypothesis
IMC-brand image	0/492	(More than 1.96)	Confirming hypothesis
IMC-perceived quality	0/027	(More than 1.96)	No confirmation
IMC-loyalty to the brand	0/452	(More than 1.96)	Confirming hypothesis
Perceived quality-brand image	0/299	(More than 1.96)	Confirming hypothesis
Perceived quality-loyalty to the brand	0/394	(More than 1.96)	Confirming hypothesis





**Figure 1. Conceptual model for innovation relation in IMC and brand equity.**

**Figure 2. The analysis of the route in standard status**



**Figure 3. significance factors of the route**

